

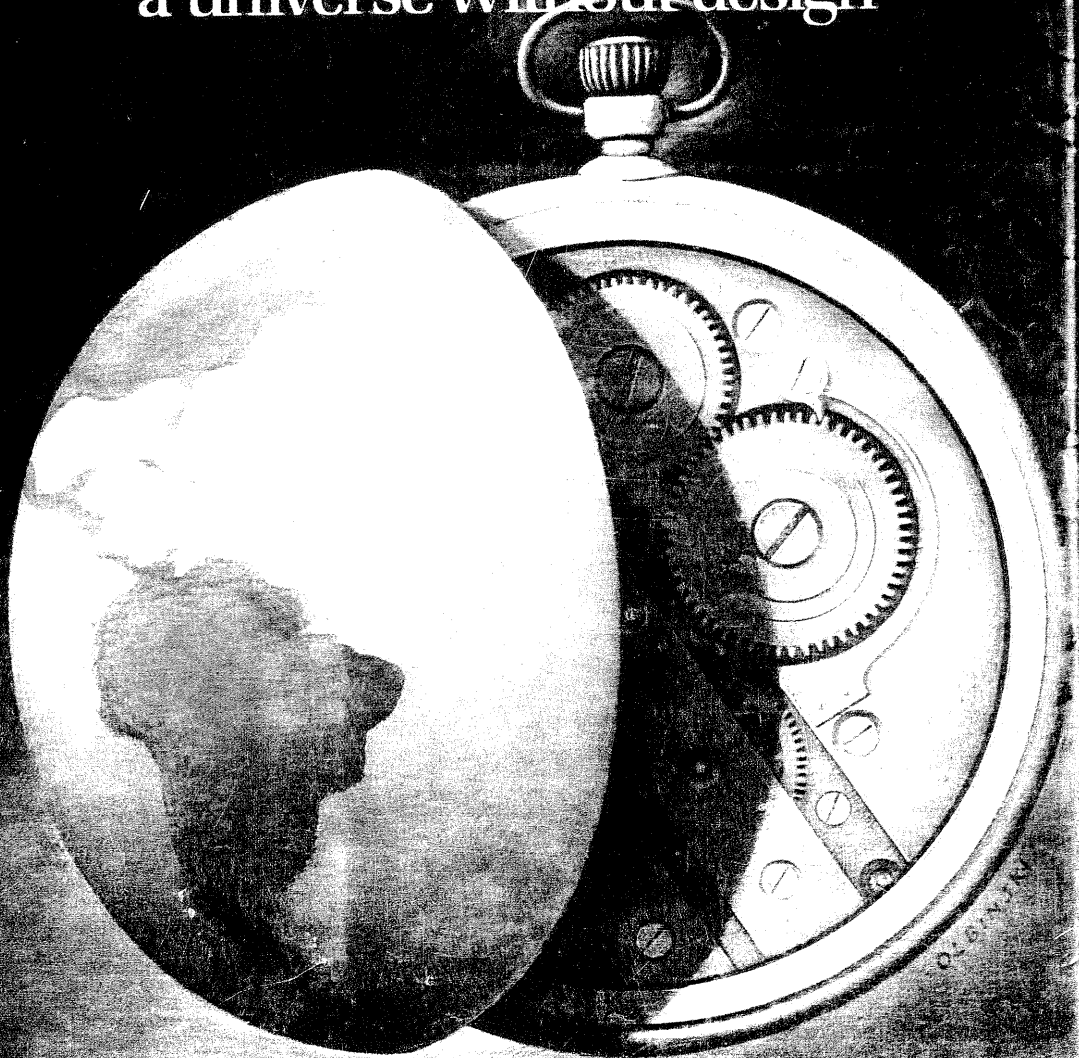
Exhibit B

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RICHARD DAWKINS

The Blind Watchmaker

Why the evidence of evolution reveals
a universe without design



BY THE AUTHOR OF THE SELFISH GENE

Paley knew that it needed a special explanation; Darwin knew it, and I suspect that in his heart of hearts my philosopher companion knew it too. In any case it will be my business to show it here. As for David Hume himself, it is sometimes said that that great Scottish philosopher disposed of the Argument from Design a century before Darwin. But what Hume did was criticize the logic of using apparent design in nature as *positive* evidence for the existence of a God. He did not offer any *alternative* explanation for apparent design, but left the question open. An atheist before Darwin could have said, following Hume: 'I have no explanation for complex biological design. All I know is that God isn't a good explanation, so we must wait and hope that somebody comes up with a better one.' I can't help feeling that such a position, though logically sound, would have left one feeling pretty unsatisfied, and that although atheism might have been *logically* tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist. I like to think that Hume would agree, but some of his writings suggest that he underestimated the complexity and beauty of biological design. The boy naturalist Charles Darwin could have shown him a thing or two about that, but Hume had been dead 40 years when Darwin enrolled in Hume's university of Edinburgh.

I have talked glibly of complexity, and of apparent design, as though it were obvious what these words mean. In a sense it is obvious – most people have an intuitive idea of what complexity means. But these notions, complexity and design, are so pivotal to this book that I must try to capture a little more precisely, in words, our feeling that there is something special about complex, and apparently designed things.

So, what is a complex thing? How should we recognize it? In what sense is it true to say that a watch or an airliner or an earwig or a person is complex, but the moon is simple? The first point that might occur to us, as a necessary attribute of a complex thing, is that it has a heterogeneous structure. A pink milk pudding or blancmange is simple in the sense that, if we slice it in two, the two portions will have the same internal constitution: a blancmange is homogeneous. A car is heterogeneous: unlike a blancmange, almost any portion of the car is different from other portions. Two times half a car does not make a car. This will often amount to saying that a complex object, as opposed to a simple one, has many parts, these parts being of more than one kind.

Such heterogeneity, or 'many-partedness', may be a necessary condition, but it is not sufficient. Plenty of objects are many-parted and heterogeneous in internal structure, without being complex in the sense in which I want to use the term. Mont Blanc, for instance, consists of many different kinds of rock, all jumbled together in such a